



# GRAIN TRANSPORTATION REPORT

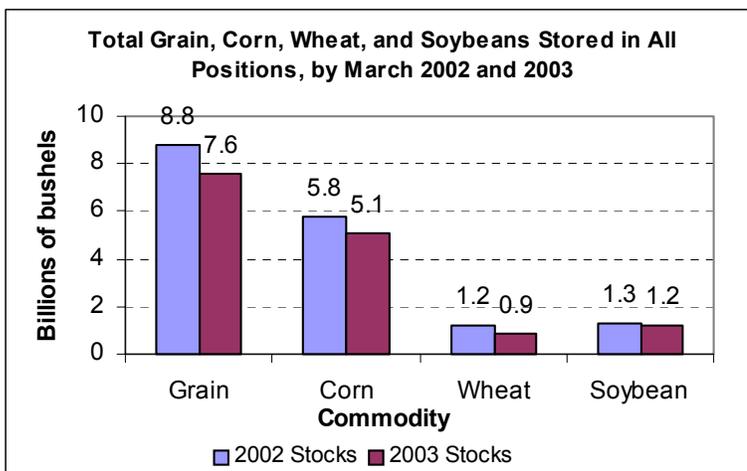
Transportation & Marketing, Agricultural Marketing Service  
United States Department of Agriculture

APRIL 17, 2003

<u>TM GRAIN TRANSPORT COST INDICATORS</u>	<u>Truck</u>	<u>Rail</u>	<u>Barge</u>	<u>Ocean</u>	
				<u>Gulf</u>	<u>PNW</u>
Indicator Value* for 04/17	103	101	58	110	108
Compared to Last Week	↓	→	↓	↑	↑

\*Indicator: Base Year 2000=100; Weekly Updates include Truck=Diesel; Rail=Nearby Secondary Rail Market; Barge=Spot Illinois River Basis; Ocean Vessel based on Routes to Japan

**March Total Grain Stocks Down in 2003.** Total grain stored in all positions as of March 1, 2003, was down 1.19 billion bushels for a total of 7.61 billion bushels, a 14-percent reduction, compared to March 2002 (see figure below). Fifty-one percent of the grain was stored on farms, while the remainder was stored in off-farm facilities. A similar percentage of grain was stored on farms during the previous March.



Data source: *Grain Stocks*, NASS, USDA, March 31, 2003

**Corn, Wheat, Soybeans Stored in All Positions Down in 2003.** As of March 1, 2003, corn stored in all positions totaled 5.13 billion bushels, down 663 million bushels or 11 percent, compared to March 1, 2002. Of the total corn stored, 2.94 billion bushels were stored on farms, down 12 percent from a year earlier. Off-farm stocks, at 2.19 billion bushels, were down 8 percent from the previous year.

All wheat stocks in all positions as of March 1, 2003, totaled 905 million bushels, a 25-percent reduction in stocks held a year ago. On-farm stocks, estimated at 233 million bushels, were down 31 percent from the previous March, while off-farm stocks, at 672 million bushels, were down 23 percent from a year earlier.

Soybeans stored in all positions as of March 1, 2003, totaled 1.20 billion bushels, down 10 percent from a year earlier. On-farm stocks, at 636 million bushels, were down 7 percent, while off-farm stocks, at 566 million bushels, were down 13 percent from March 2002.

**Lower Stocks May Impact Grain Transportation.** Lower grain stocks may decrease the demand for transporting grain, increase transportation costs, and affect shippers' preferred transportation mode. Lower stocks result when domestic and foreign demand increases or remains at the current level while production is low. Grain-deficit regions may then have to purchase grain and oilseeds from nontraditional sources. In addition, if regions must haul grain from long distances, the cost for hauling grain may increase, forcing shippers to reevaluate their preferred mode of transportation. Grain prices may also increase. As grain prices increase, farmers are more willing to sell their grain, partially offsetting the decreased demand for transportation. [Surajudeen.Olowolayemo@usda.gov](mailto:Surajudeen.Olowolayemo@usda.gov).

Report is prepared by Deen Olowolayemo, Johnny Hill and Karl Hacker, Agricultural Economists, Transportation & Marketing, Agricultural Marketing Service, USDA (202) 690-1304. Support provided by Upper Great Plains Transportation Institute, North Dakota State University. This report can be found on the Internet at [www.ams.usda.gov/tmd/grain.htm](http://www.ams.usda.gov/tmd/grain.htm). E-mail comments and questions to [Surajudeen.Olowolayemo@usda.gov](mailto:Surajudeen.Olowolayemo@usda.gov).

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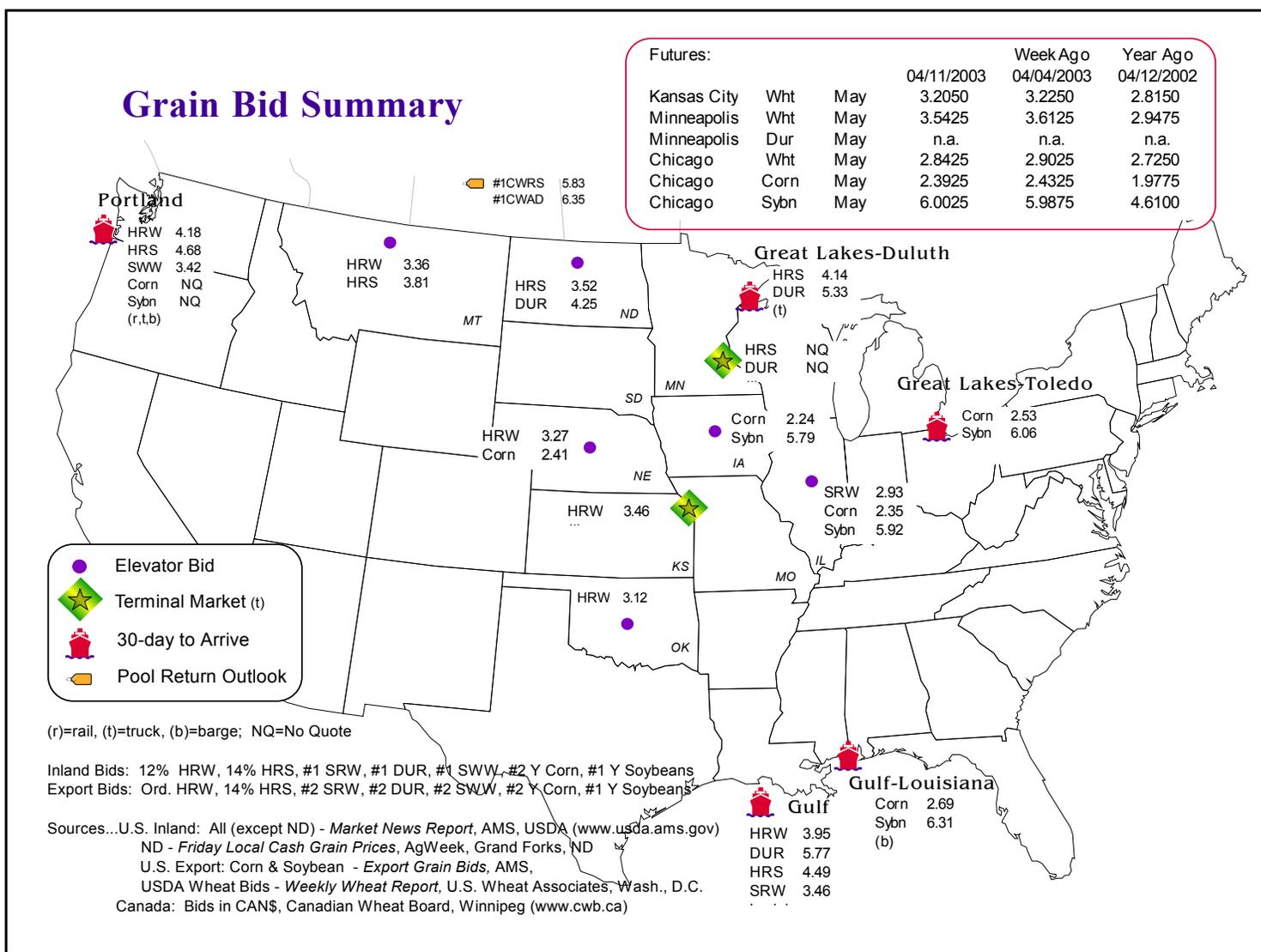
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The Grain Transportation Report is a weekly news source for grain logistics. Detailed data and trend information on five major modes: barge, truck, rail, container, and vessel, provide timely insight into grain transport. The report is offered to policymakers and industry as a tool in day-to-day decision making and longer-term strategic planning for an effective and efficient U.S. grain logistics system.

**Market Update: U.S. Origins to Export Position Price Spreads (Per Bushel)**

Commodity	Origin--Destination	This week	Last week
Corn	IL -- Gulf	-0.34	-0.32
Corn	NE -- Gulf	-0.28	-0.26
Soybean	IA -- Gulf	-0.52	-0.59
HRW	KS -- Gulf	-0.49	-0.43
HRS	ND -- Portland	-1.16	-1.16

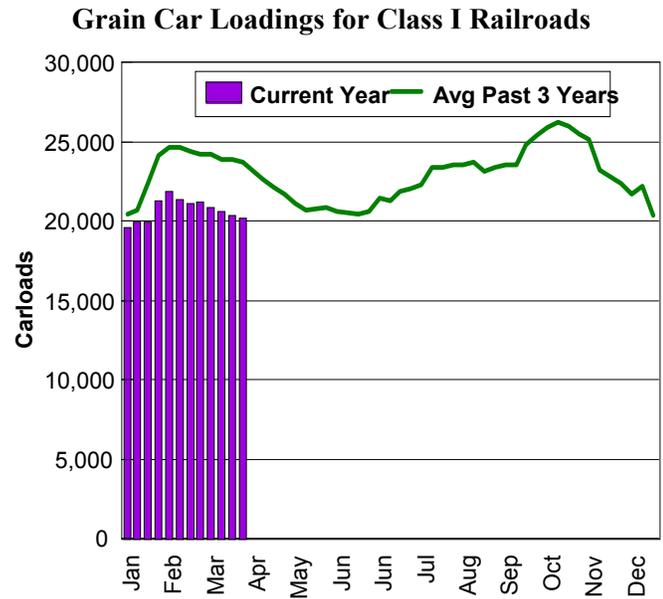
The **Grain Bid Summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.



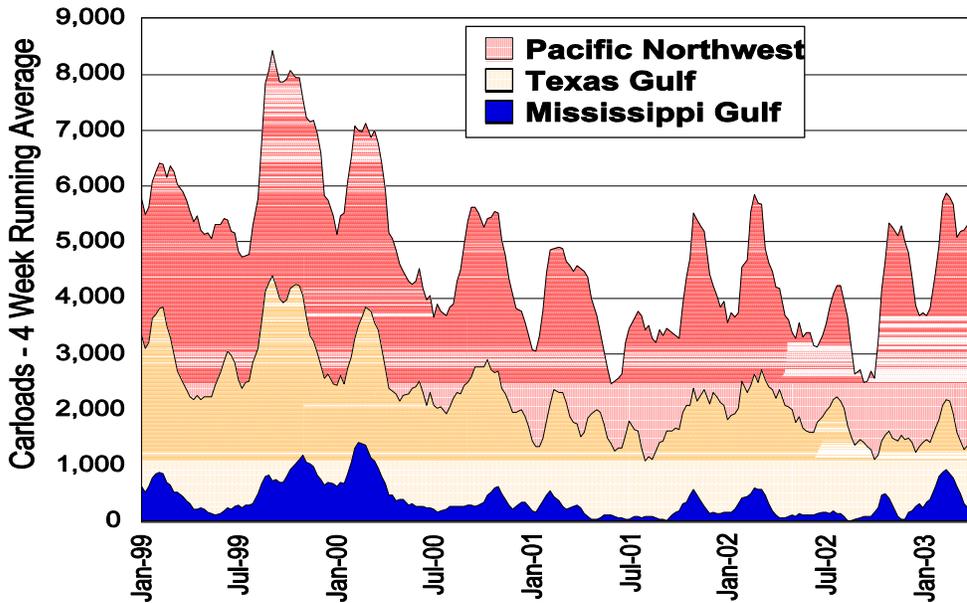
**RAIL TRANSPORTATION**

<b>Rail Deliveries to Port (Carloads)</b>					
	<b>Mississippi Gulf*</b>	<b>Texas Gulf</b>	<b>Pacific Northwest</b>	<b>Atlantic &amp; East Gulf</b>	<b>Total</b>
Week Ending:					
03/26/03	198	1,440	4,292	234	6,164
04/02/03	323	1,405	3,866	166	5,760
YTD 2003	7,716	27,390	32,832	9,296	74,572
YTD 2002	4,997	27,849	32,563	9,348	74,757
% YTD 2002	154%	98%	101%	99%	100%
Total 2002	11,112	83,799	111,719	21,551	228,181
Total 2001	10,022	81,804	111,376	26,604	229,806

Source: Transportation & Marketing/AMS/USDA; (\*) Incomplete Data



**Rail Deliveries to Port**



Railroads originate approximately 40% of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.

**Class I Rail Carrier Grain Car Bulletin (Grain Carloads Originated and Grain Service Index)**

	<b>East</b>		<b>BNSF</b>	<b>West</b>		<b>U.S. Total</b>	<b>Canada</b>	
	<b>CSXT</b>	<b>NS</b>		<b>KCS</b>	<b>UP</b>		<b>CN</b>	<b>CP</b>
04/05/03	2,678	3,245	8,446	378	5,855	20,602	3,668	3,290
This Week Last Year	2,606	3,545	6,931	538	7,100	20,720	4,356	4,363
2003 YTD	40,648	45,319	110,189	5,266	91,100	292,522	47,849	47,613
2002 YTD	41,862	44,617	111,183	8,938	95,846	302,446	55,743	51,954
% of Last Year	97%	102%	99%	59%	95%	97%	86%	92%
2002 Total	142,760	164,745	400,179	27,161	344,296	1,079,141	191,835	195,765

**U.S. Rail Covered Hopper Cars Online Index\***

March-03	97.0	101.4	94.1	86.0	90.2	94.2
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Source: Association of American Railroads; \*Base Year =2001, Index based on Number of Covered Hopper Cars Online (available for Service).

Rail service may be ordered directly from the railroad via **Auction** for guaranteed service or tariff for non-guaranteed service, or through the secondary market. The **Secondary Rail Market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The auction and secondary rail values are indicators of rail service quality and demand/supply.

**Railroad Car 'Auction' Results**

Average Premium/Discount to Tariff, \$/Car - Last Auction

Delivery for:	May-03	Jun-03	Jul-03
COT/N. Grain	no bid	no bid	no bid
COT/S. Grain	no bid	no bid	no bid
GCAS/Region 1	no bid	no bid	no bid
GCAS/Region 2	no bid	no bid	no bid

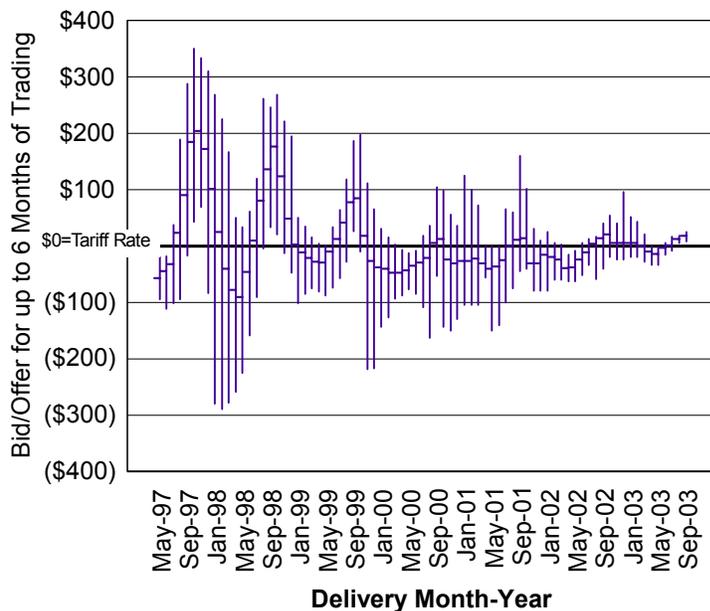
Source: Transportation & Marketing/AMS/USDA.  
COT=Certificate of Transportation; GCAS=Grain Car Allocation System

**Secondary Rail Car Market**

Average Premium/Discount to Tariff, \$/Car - Last Week

	Delivery Period			
	Apr-03	May-03	Jun-03	Jul-03
BNSF-GF	\$(8)	\$(14)	\$(7)	\$(4)
UP-Pool	\$(2)	\$(8)	\$0	\$6

**Secondary Rail Market Bid**



**Tariff Rail Rates for Unit Train Shipments**

April 2003

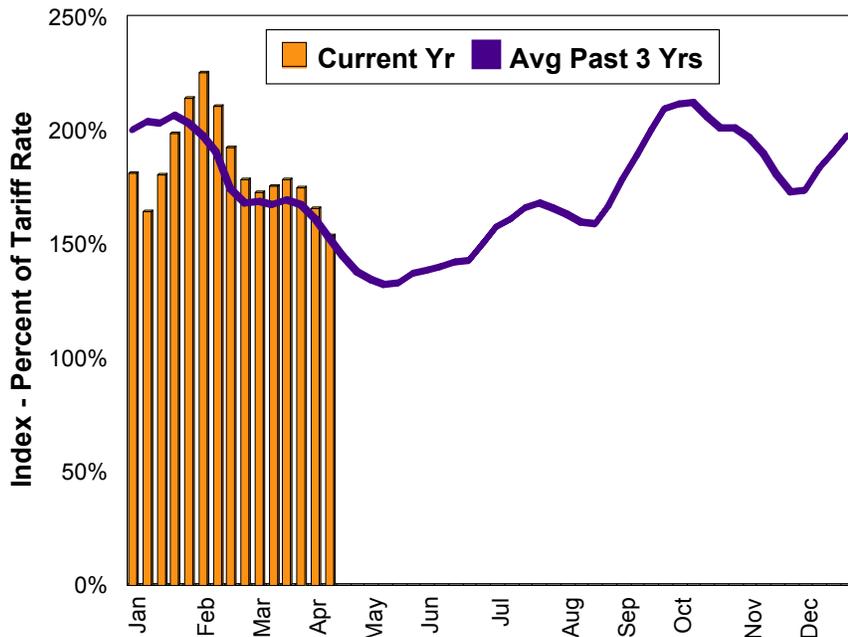
Date Effective	Tariff Item	Commodity	Origin	Destination	Rate Per Car	Rate Per MT	Rate/Per Bushel*
04/07/03	45560	Wheat	Minneapolis, MN	Houston, TX	\$2,050	\$22.60	\$0.62
04/07/03	43521	Wheat	Minneapolis, MN	Portland, OR	\$3,877	\$42.74	\$1.16
04/07/03	46540	Wheat	Kansas City, MO	Houston, TX	\$1,650	\$18.19	\$0.50
04/07/03	43586	Wheat	Kansas City, MO	Portland, OR	\$4,420	\$48.72	\$1.33
04/07/03	43581	Wheat	Omaha, NE	Portland, OR	\$4,005	\$44.15	\$1.20
04/07/03	31005	Corn	Minneapolis, MN	Portland, OR	\$3,050	\$33.62	\$0.85
04/07/03	31035	Corn	Kansas City, MO	Portland, OR	\$2,700	\$29.76	\$0.76
04/07/03	31005	Corn	Omaha, NE	Portland, OR	\$2,850	\$31.42	\$0.80
04/07/03	61110	Soybean	Minneapolis, MN	Portland, OR	\$3,030	\$33.40	\$0.91
04/07/03	61110	Soybean	Omaha, NE	Portland, OR	\$2,780	\$30.64	\$0.83

Source: www.bnsf.com

Approximate load per car = 100 tons: Corn 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

**BARGE TRANSPORTATION**

**Illinois River Barge Rate Index - Rate Quotes**



The **Illinois River Barge Rate Index** averaged 183% of the Benchmark Tariff Rate between 1999 and 2001, based on weekly market quotes. The **Index**, along with **Rate Quotes** and **Futures Market** bids are indicators of grain transport supply and demand.

Calculating **Barge Rate Per Ton**:  
 Index × 1976 Tariff Benchmark Rate per Ton

Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map below.

<b>BARGE RATE QUOTES: Southbound Barge Freight</b>				
Index=Percent of Tariff, Based on 1976 Tariff Benchmark Rate				
	4/9/03	4/2/03	May '03	July '03
Twin Cities	188	186	181	194
Mid-Mississippi	158	154	149	167
Illinois River	143	145	142	158
St. Louis	110	115	119	134
Lower Ohio	121	128	127	144
Cairo-Memphis	105	109	110	123

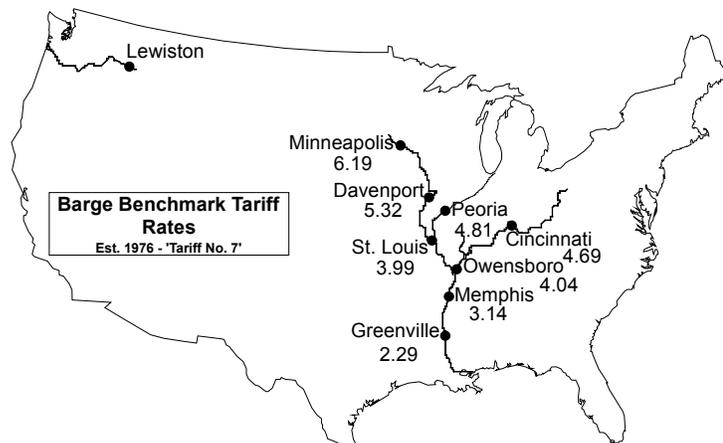
Source: Transportation & Marketing /AMS/USDA  
 nq=no quote

**BARGE FUTURES MARKET**

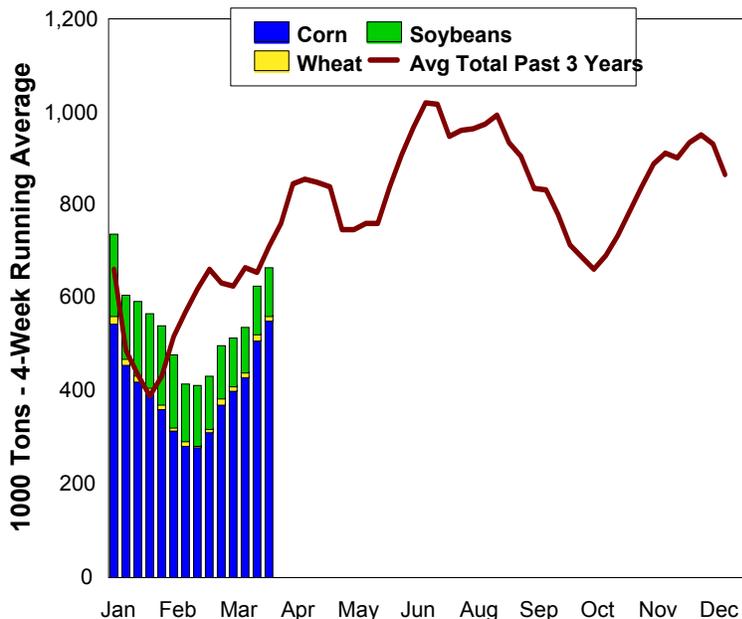
**Southbound Barge Freight Nominal/Cash Basis Values**  
 Index=Percent of Tariff, Based on 1976 Tariff Benchmark Rate

Week ended	River/Region	Contract Period	Rate	
			Futures	Cash
4/15/03	St. Louis	May	n/a	128
		July	n/a	135
		Sept	n/a	175
		Nov	n/a	155
	Illinois River	Dec	n/a	135
		May	n/a	143
		July	n/a	153
		Sept	n/a	190
		Nov	n/a	175
		Dec	n/a	165

Source: St. Louis Merchants Exchange



Barge Movements on the Mississippi River (Lock 27)



**Barge Grain Movements (1,000 Tons)**

for week ending 4/05/03

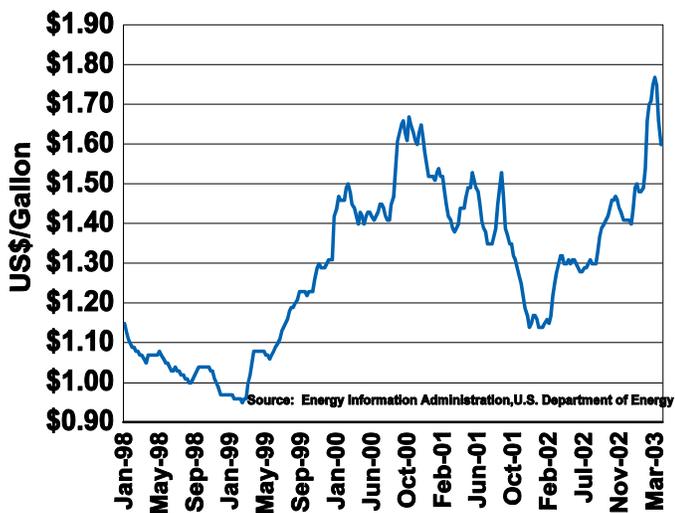
	<u>Corn</u>	<u>Wht</u>	<u>Sybn</u>	<u>Total</u>
<b>Mississippi River</b>				
Rock Island, IL (L15)	256	0	42	298
Winfield, MO (L25)	456	0	97	553
Alton, IL (L26)	676	12	135	825
Granite City, IL (L27)	675	14	135	824
<b>Illinois River (L8)</b>	213	12	45	270
<b>Ohio River (L52)</b>	37	5	24	74
<b>Arkansas River (L1)</b>	0	11	6	17
2003 YTD	6,667	503	2,905	10,406
2002 YTD	8,532	544	3,080	12,755
% of 2002 YTD	79%	93%	95%	82%
Total 2001	31,878	2,679	10,616	47,091

Source: U.S. Army Corp of Engineers

YTD and Calendar year total includes Miss/27, Ohio/52 and Ark/1.

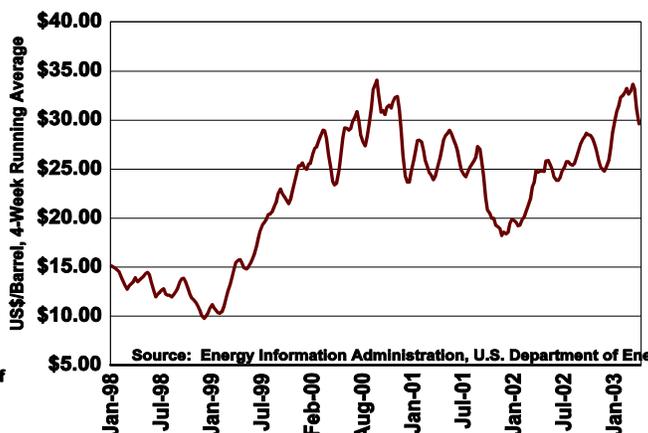
**TRUCK TRANSPORTATION**

Weekly U.S. Retail Road Diesel Price



The weekly **Diesel Price** provides a proxy for trends in U.S. truck rates. Diesel fuel is a significant expense for truck grain movements, accounting for 37% of the estimated variable cost. **Crude Oil Price** is an indicator in future diesel price trends.

Weekly Brent Crude Price, Friday Close



Crude Oil Prices (04/15/03)

US\$ per Barrel	<u>This Week</u>	<u>Last Week</u>	
Light Sweet Crude (NYMEX)	27.61	26.67	↑
Brent Crude	24.83	25.08	↓

Note: Light Sweet Crude is exchanged on the New York Mercantile Exchange. North Sea oil has a "benchmark" role in crude oil pricing. Brent crude, a blend of North Sea oils, is traded on the International Petroleum Exchange in London.

Source: [www.eia.doe.gov](http://www.eia.doe.gov); \*U.S. Refiner Crude Acquisition Cost, Composite Domestic & Import

**GRAIN EXPORTS**

<b>U.S. Export Balances (1,000 Metric Tons)</b>										
	HRW		SRW		Wheat			Corn	Soybean	Total
	HRW	SRW	HRS	SW W	DUR	All				
04/03/2003	1,082	336	1,062	469	169	3,117	5,728	3,086	11,931	
This Week Year Ago	1,118	734	659	424	104	3,038	6,302	2,538	11,878	
Commulative Exports-Crop Year										
02/03 YTD	5,970	2,576	5,543	3,080	643	17,803	23,706	23,848	65,357	
01/02 YTD	7,301	4,706	4,700	2,720	1,025	20,452	27,020	23,261	70,733	
01/02 Total	8,761	5,485	5,582	3,175	1,133	24,135	48,003	29,926	102,064	
00/01 Total	9,314	4,445	5,775	5,156	1,130	25,819	47,734	27,567	101,120	
99/00 Total	10,629	4,195	5,590	4,055	984	25,453	48,760	26,972	101,185	

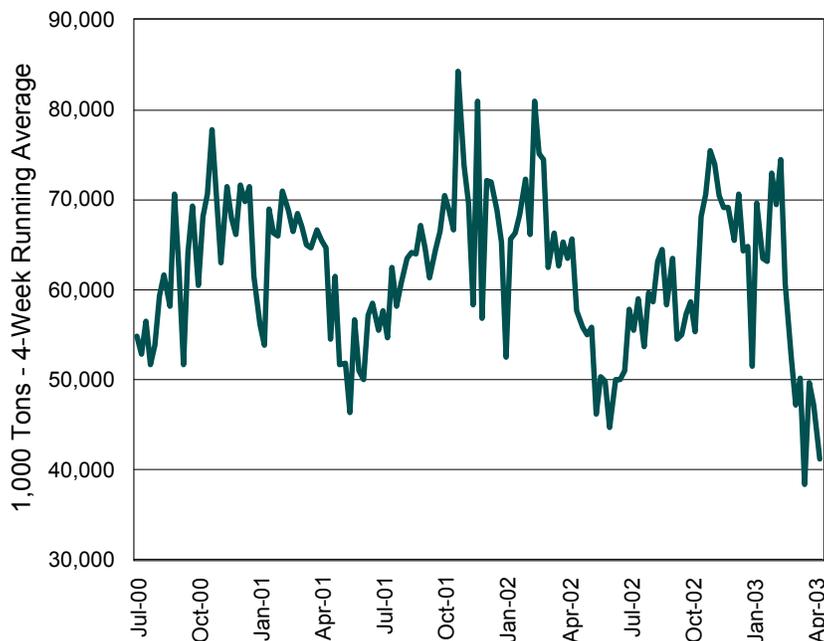
Source: Foreign Agricultural Service YTD-Year-to-Date (www.fas.usda.gov)

**Select U.S. Port Regions - Grain Inspections for Export (1,000 Metric Tons)**

	Pacific Region			Mississippi Gulf			Texas Gulf			Port Region Total		
	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Pacific	Mississippi	Texas
04/10/03	122	58	73	96	519	191	141	0	0	253	806	141
2003 YTD	2,307	1,673	2,041	1,424	7,501	7,978	1,299	526	50	6,022	16,904	1,875
2002 YTD	2,583	1,555	952	1,798	10,500	7,472	1,858	99	235	5,091	19,770	2,193
% of 2002 YTD	89%	108%	214%	79%	71%	107%	70%	531%	21%	118%	86%	85%
2002 Total	10,007	5,877	1,639	6,829	34,991	17,996	6,971	468	468	17,523	59,816	7,906

Source: Federal Grain Inspection Service YTD-Year-to-Date

**U.S. Grain Inspected for Export**



**Select Canadian Port Export Inspections**

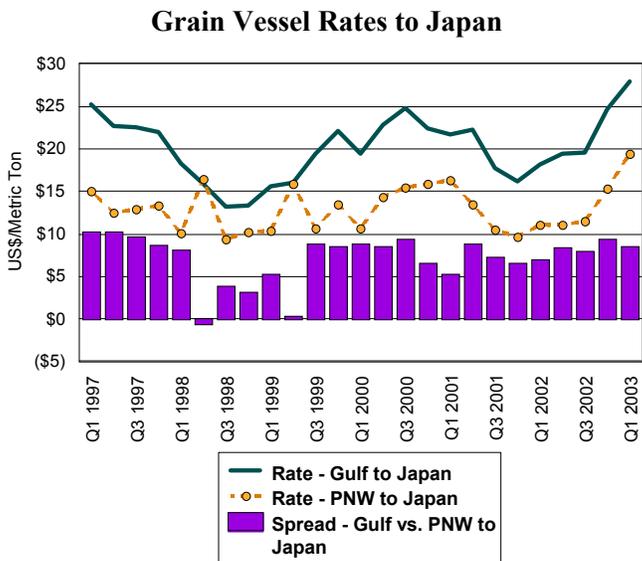
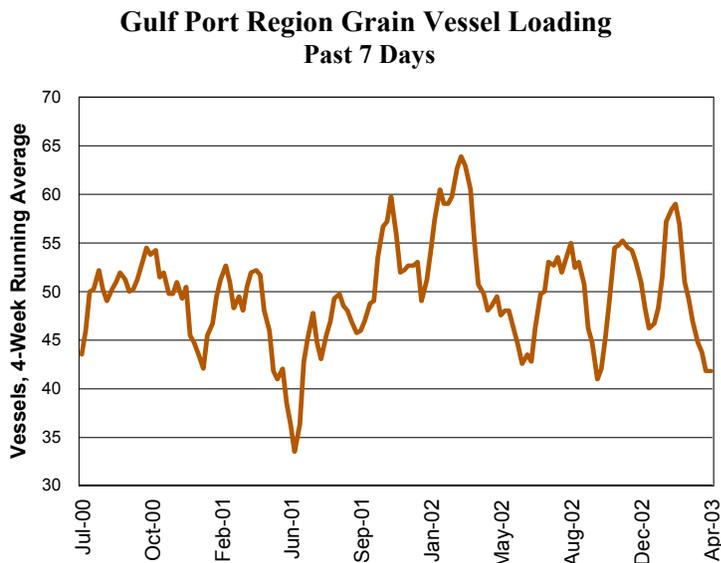
1,000 Metric Tons, Week End Summary

	Wheat	Durum	Barley
04/03/2003			
Vancouver	52		4
Prince Rupert			
Prairie Direct	11		1
Thunder Bay			
St. Lawrence	3,350	1,760	256
2001/02 YTD	8,752	2,211	702
2002/03 YTD	3,413	1,760	261
% of Last Year	256%	126%	269%

Source: Canadian Grains Commission, Crop Year 8/1-7/31

Port Region Ocean Grain Vessels					
	Gulf			Pacific Northwest	Vancouver B.C.
	In Port	Loaded	Due Next	In Port	In Port
		7-Days	10-Days		
04/03/03	19	40	50	9	4
04/10/03	24	44	49	4	4
2002 Range	(15..55)	(33..66)	(44..82)	(3..15)	(0..12)
2002 Avg	35	51	65	8	5

Source: Transportation & Marketing /AMS/ USDA



Quarterly Ocean Freight Rates							
Average Rates & Percentage Changes, U.S. Dollars/Metric Ton							
	2003 1 <sup>st</sup> Qtr	2002 1 <sup>st</sup> Qtr	% Change		2003 1 <sup>st</sup> Qtr	2002 1 <sup>st</sup> Qtr	% Change
<b>Gulf to</b>				<b>Pacific NW to</b>			
Japan	\$27.91	\$18.25	53%	Japan	\$19.43	\$11.31	72%
Mexico	-	\$31.49	-				
Venezuela	\$15.00	-	-				
<b>Argentina/Brazil to</b>							
N. Europe	\$14.50	\$10.67	36%	Med. Sea	\$25.35	\$17.85	42%
N. Africa	-	\$17.58	-	N. Europe	-	\$13.48	-
Med. Sea	\$14.50	\$10.97	32%	Japan	-	\$25.59	-

Source: Transportation & Marketing/AMS/USDA

Ocean Freight Rates for Selected Shipments - week ending 4/12/03						
Export Region	Import Region	Grain	Month	Volume Loaded (Tons)	Freight Rate (\$/Ton)	
U.S. Gulf	Haiti	Wheat	Apr. 19/29	8,000	\$62.00*	
U.S. Gulf	Haiti	Wheat	May 10/20	8,000	\$62.00*	
U.S. Gulf	Sierra Leone	Wheat Bagged	Apr. 8/15	2,650	\$150.00*	
U.S. Gulf	Mauritania	Wheat	Apr. 5/15	7,500	\$50.00*	
U.S. Gulf	Madagascar/Kenya	Wheat	Apr. 5/15	2,000/6,410	\$84.50*	
U.S. Gulf	Kenya	Wheat Bagged	May 8/15	3,900	\$335.69*	
PNW	No. Korea	Wheat	Apr. 21/25	10,000	\$139.98*	

Source: Maritime Research Inc.  
 Rates shown are for metric ton (2,204.62 lbs.=one metric ton), F.O.B., except where otherwise indicated; op=option  
 \*Most food aid from the United States is required to be shipped on U.S. flag vessels. The vessels are of limited availability resulting in higher rates. In addition, destinations receiving food aid generally lack adequate port unloading facilities, requiring the vessel to remain in port for a longer duration than normal.

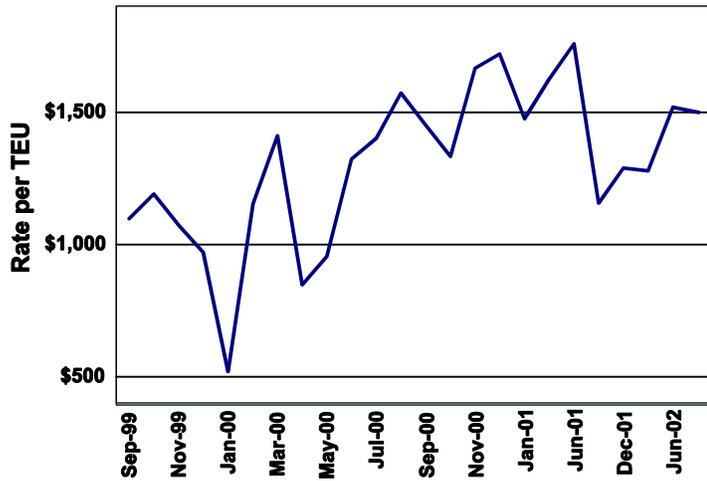
**Container Ocean Freight Rates**

Average Rate per TEU, Weighed by Shipping Line Market Share

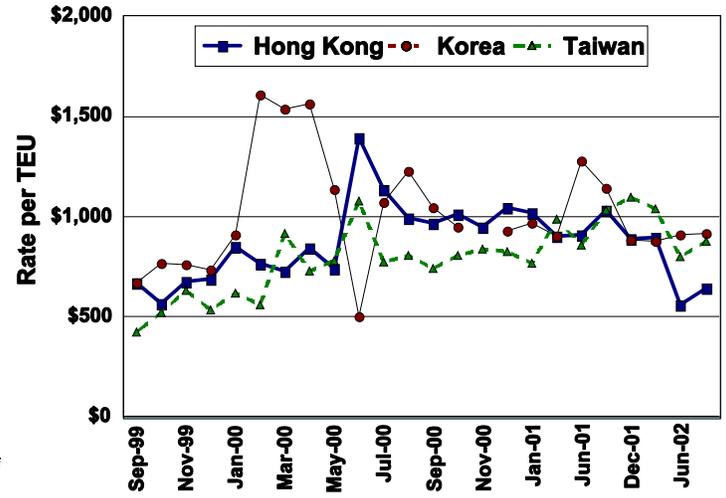
Source: Transportation & Marketing/AMS/USDA, Quarterly Updates

**CONTAINER**

**Container Rates - Soybeans**  
Seattle, WA Origin to Tokyo, Japan



**Container Rates - Feed Grain**  
Seattle, WA Origin to Selected Destinations



Approximately 420,000 MT of grain and oilseed exports were marketed via container in 2001. This volume increased 26% compared to 1997.